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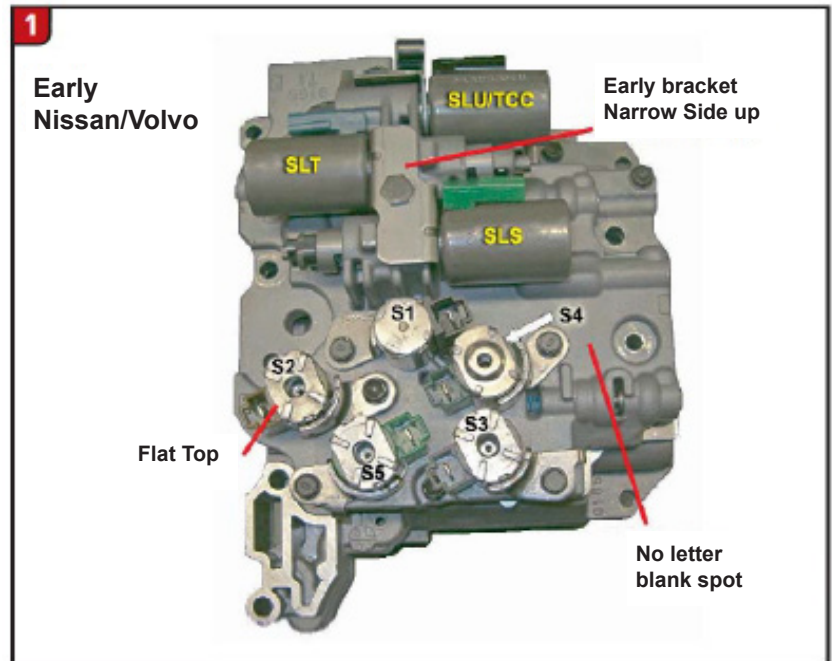
Unlocking Some AW55-50 Valve Body Mysteries

Let's start with identifying the AW 55-50 valve body and the differences that matter when you're choosing a replacement valve body. There are four castings, which can be identified by either a letter cast into the valve body just to the right of the S4 solenoid or a blank spot.

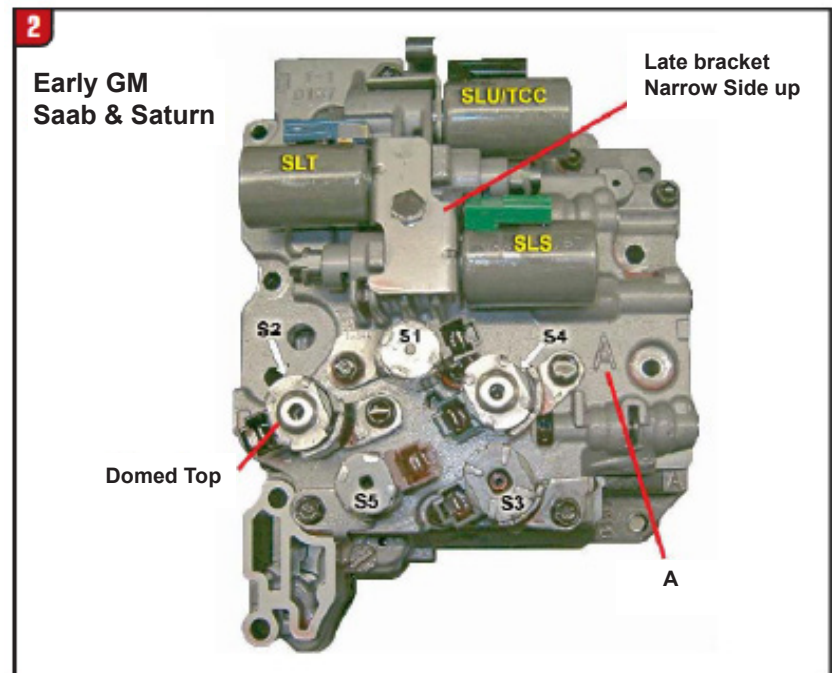
The blank spot (no letter) and A castings are considered early because the electrical connectors on the SLS and SLT solenoids face up (figures 1 & 2). The B and C casting valve bodies are considered late because the SLS and SLT solenoids have the electrical connectors facing down (figures 3 & 4 on next page). The early vehicles (2000 to sometime in 2002-2003) had an internal wiring harness that was just long enough to connect to the SLS and SLT solenoids with the electrical connectors facing up.

When the B valve body was introduced with the SLS and SLT electrical connectors facing down, the internal harness was made longer to accommodate the change.

The next wrinkle in our identification is which S2 solenoid the valve body has. Nissan and Volvo use a normally closed S2 solenoid that has a flat top with four ribs radiating from the center hole on top to the outside corners (figures 1 and 4). GM, Saab and Saturn use a normally open S2 solenoid that has a domed top (figures 2 and 3).



Early AW55-50 valve bodies can have either no letter or an 'A' cast to the right of the S4 solenoid.



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Now we can look at an AW55-50 valve body and tell whether it is early or late and whether it is a GM style or a Nissan/Volvo style. That was all you needed to know until 2005. Beginning in the 2005 model year, Nissan, GM and some Volvos changed the way that they fire the solenoids and added a spring to the inboard side of the B5 control valve. If a valve body without the B5 spring is installed on a 2005 or newer vehicle, you will get a nasty 3-2 coast-down clunk. If you install a valve body with a B5 spring into a 2004 or older vehicle you will get a 2-3 flare that will not adapt out.

It is important that you verify the model year of the vehicle by looking at the 10th digit of the vehicle identification number (VIN). A 4 in the 10th position would mean 2004, a 5 would mean 2005 and so on. If the vehicle is a 2005 or later, most will have the B5 control-valve spring (Figure 5). An exception to the rule is that some early Saturns have a B5 control valve spring. It is best to order a replacement valve body by identifying the letter code and whether it has a B5 control-valve spring because of various updates by the manufacturers over the years.

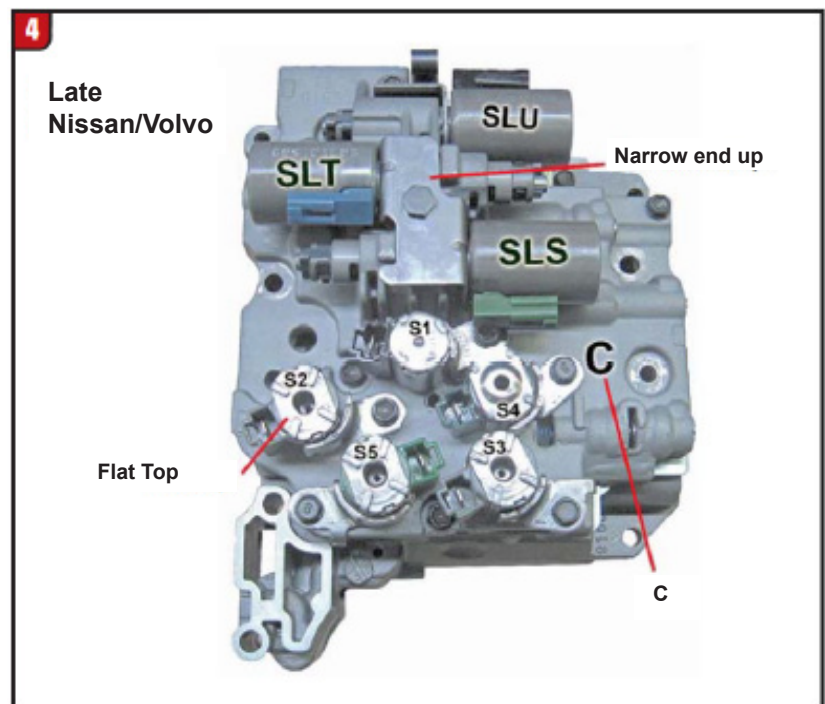
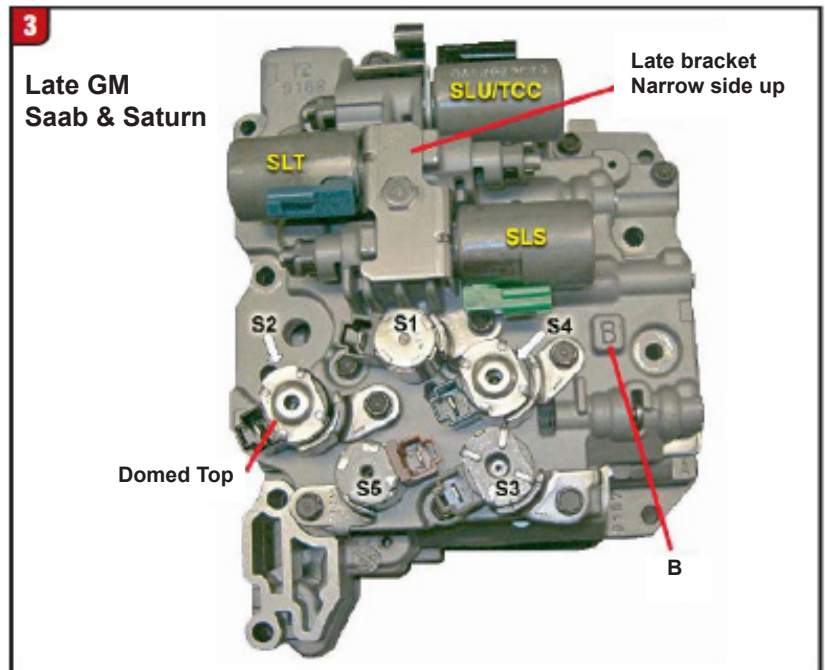
Let's talk about the linear solenoids and the correct way to install the SLT /SLS solenoid bracket. There are three design levels of the SLT and SLS solenoids. The first design is shorter than the later designs and requires the early SLT /SLS hold-down bracket (Figure 1). You can identify the early, short solenoids by the round hole in the slot where the bracket goes and the electrical connector that faces up (Figure 6). The first design SLT /SLS solenoids are used on the valve body casting with no letter.

The second design solenoids are longer and the electrical connector faces up. The second-design SLT /SLS solenoids are used on the A casting valve bodies (Figure 2).

The third design solenoids are the same length as the second design but the electrical connector faces down. The third design SLT /

SLS solenoids are used on the B and C casting valve bodies. Both the second and third design SLT /SLS solenoids require the late hold down bracket with the

backward L at the bottom (figures 3 and 4). Always install the hold down brackets with the narrow end of the bracket facing up.



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A good way to verify that the SLT /SLS hold down bracket is installed correctly is to look into the exhaust slot for each solenoid to see whether the slot on the solenoid is aligned with the exhaust slot. If the solenoid is blocking the exhaust slot, the bracket is on upside down or the wrong bracket is being used (Figure 7). If the exhaust slots are blocked, line pressure will go to maximum and the engagements and shifts will be harsh.

AW55-50 valve body identification quick reference:

Determine early or late valve body by using the letter code to the right of the S4 solenoid: No letter or A= early valve body, B or C = late valve body.

Determine Volvo/Nissan or GM/Saab/Saturn valve body by the shape of the S2 solenoid.

Determine 2005-up on B & C valve bodies by checking for a B5 control valve spring (Figure 5).

When installing the SLS and SLT solenoids, always install the hold down bracket with the narrow side up (figures 2,3,4 and 7).

Use the early SLS/SLT hold down bracket with only the first design solenoids that have the round hole in the snout (figures 1 and 6).

With this information you should be able to identify any AW55-50 valve body.

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AW 55-50 Middle valve body

Confirm the model year of the vehicle by looking at the 10th digit of the Vehicle Identification number.

The valve body does not have to be disassembled to remove the two-bolt end plate.

Remove the two-bolt end plate and check under the B5 control valve to see whether there is a spring

Spring

B5 Control Valve

6

First-design SLS Must use the early bracket

Round-hole Identifier

7

The SLU solenoid with the black electrical connector is the same for all years

SLT solenoid exhaust Slot

SLS solenoid exhaust Slot

AW55-50SN

Description	Part No.
OVERHAUL KITS	
AW55-50SN Kit-Overhaul (Vauxhall)	79.KO.52
AW55-50SN Kit-Overhaul (Volvo Saab Opel Renault)	79.KO.70
GASKETS & SEALS	
AW55-50SN Gasket-Sump Pan (Steel)	79.GK.02
AW55-50SN Kit-Gasket Valvebody	79.KX.05
AW55-50SN,AW55-40 Kit-Seals (1st,2nd & Rev.)	79.KZ.21
CLUTCH PLATES	
AW55-50SN Kit-Module Friction	79.KC.60
Frictions	
AW55-50SN 2nd (160.0mm OD 1.7mm 40T)	79.PF.82
AW55-50SN 4-5 (113.8mm OD 1.7mm 34T)	79.PF.83
AW55-50SN Rear (141.0mm OD 1.7mm 47T)	79.PF.88
AW55-50SN Forward (136.5mm OD 1.7mm 49T)	79.PF.90
AW55-50SN Direct (108.0mm OD 1.50mm 34T)	79.PF.01
AW55-50SN Coast (108.0mm OD 1.73mm 34T)	79.PF.50
AW55-50SN Low/Rev. (160.0mm OD 1.7mm 34T)	79.PF.20
Steels	
AW55-50SN Coast (116mm OD 1.8mm 8T)	79.PS.01
AW55-50SN/50-40 Direct (116.2mm 1.8mm 12T)	79.PS.04
AW55-50SN/50-40 2nd (169.0mm OD 1.8mm 10T)	79.PS.07
AW55-50SN/50-40 2nd (169.0mm OD 3.5mm 10T)	79.PS.08
AW55-50SN Rear (150.0mm OD 1.8mm 12T)	79.PS.09
AW55-50SN Low/Rev (169.0mm 1.8mm 13T)	79.PS.10
AW55-50SN 2nd (169.1mm OD 4.0mm 10T)	79.PS.11
AW55-50SN Forward (142.2mm OD 2mm 12T) 00-up	79.PS.12
AW55-50SN (4-5)/50-42(Dir.)(119.3mm OD 1.8mm 10T)	79.PS.15
FILTERS	
AW55-50SN Filter Assembly (Late)	79.FL.08A
AW55-50SN Filter Assembly Volvo S80 (W/Webb)	79.FL.50A
BANDS	
AW55-50SN Brake Band	79.BB.05
METAL CLAD SEALS	
AW55-50SN,5040 Seal-Front Pump	79.SM.01
AW55-50SN Seal-Axle (Volvo)	79.SM.02
AW55-50SN Seal-Axle (Volvo)	79.SM.03
PISTONS	
AW55-50SN Piston-Servo Modified	79.PN.01
BUSHINGS	
AW55-50SN Kit-Bushing Planet Assembly	79.KB.01
AW55-50SN Kit-Bushing Input W/.873 dia Input 01-Up	79.KB.10
AW55-50SN Kit Bushing	79.KB.11
AW55-51SN Kit Bushing	79.KB.12
AW55-50SN Bush-Sungear (0.97mmx0.87mmx0.38mm)	79.BU.10
HARD PARTS	
AW55-50SN Drum-Input	79.HP.60
AW55-50SN Adaptor Shaft-Transfer Case (4x4)	79.HP.91

Description	Part No.
ELECTRICAL	
AW55-50SN Solenoid S1 Vauxhall (Black)	79.SW.21A
AW55-50SN Solenoid S1 (Black) 02E-up	79.SW.21B
AW55-50SN Solenoid S2 (Grey)-02E	79.SW.22
AW55-50SN Solenoid S3 (Grey)-02E	79.SW.23
AW55-50SN Solenoid S4 (Blue)-02E	79.SW.24
AW55-50SN Solenoid S5 (Brown) Upgraded	79.SW.25
AW55-50SN Solenoid S5 Vaux/Saab (Brown)	79.SW.25A
AW55-50SN Solenoid SLU (Black)-02E	79.SW.27
AW55-50SN Solenoid SLT (Blue) 02E-up	79.SW.28A
AW55-50SN Solenoid SLT (Blue) 02E-up	79.SW.28R
AW55-50SN Solenoid SLS (Green) 02E-up	79.SW.29A
AW55-50SN Solenoid SLU (Aftermarket) 01-Up	79.SW.30
AW55-50SN Sensor-Input	79.SW.50
AW55-50SN Wiring Harness Volvo V70 (OEM)	79.MP.60
AW55-50SN Modified Harness E57	79.MP.65
AW55-50SN Wiring Harness (Modified)	79.MP.66
VALVE BODY REPAIR	
AW55-50SN Valve Body Plate	79.MP.80
AW55-50SN Valve Body Plate 6A Modified	79.MP.81
AW55-50SN Valve Body Upper J73 Modified	79.VB.01
AW55-50SN Valve Body Upper J5 Modified	79.VB.02
AW55-50SN Bracket-Solenoid Retainer	79.MP.10
AW55-50SN Kit-Valvebody Check Ball	79.MP.23
Sonnax	
AW55-50SN Secondary Valve & Spring Kit	79.MP.02
AW55-50SN Lock-Up Relay Control Valve & Sleeve Kit	79.MP.30A
AW55-50SN Lock-Up Control Valve & Sleeve Kit	79.MP.30B
AW55-50SN Solenoid Relay Control Valve & Sleeve Kit	79.MP.30C
AW55-50SN Main Boost Valve & Sleeve Kit	79.MP.30D
AW55-50SN Solenoid Mod Valve Capsule	79.MP.30E
AW55-50SN Press Reg Valve & Boost Valve Kit	79.MP.30F
AW55-50SN LPC Accumulator Piston Kit	79.MP.30G
AW55-50SN B4 Release Valve Kit	79.MP.32
AW55-50SN End Plug Kit	79.MP.51